

## REMARKS

Further reconsideration of the application is requested in view of the amendments above and comments which follow.

### Claim rejections – §102

Further to the examiner's comments regarding claim 93, the claim has been re-cast in the form of a method claim to emphasize how its subject matter is distinguished from the prior art.

Claim 111 has been cancelled.

### Claim rejections – §103

Claim 67 has been amended to specify that the thin and thicker crystals are read out by pairs of read-out devices. The thicker crystal is read out at a number of different depths in the beam direction. The output signal from one read-out device from each pair is added to the signal from the other device of the pair on the opposite side of the crystal to reduce any left/right asymmetry in the output signals.

This read-out configuration is not disclosed or suggested by either Neale (US 5523133) or Maekawa (US 6570160), and therefore also not by a combination of their teachings.

The Examiner asserts in relation to claim 83 that DiFilippo (US 6078052) discloses "adding the signals of all fibres in the bundle of fibres at 14". However, it can be seen from Figures 2 and 3 that while the fibres (50, 52, 54, 56) from each bundle 14 are combined, each bundle is localized on one side of the crystal 12. There is no disclosure or suggestion of taking an output signal from one side of the crystal and taking another output signal generated at a corresponding position on the other side of the crystal and then adding the two signals together to reduce left/right asymmetry. Accordingly, it is submitted that even if DiFilippo were to be combined with Neale and Maekawa by the skilled person, the skilled person would still not be led to develop the configuration defined by amended claim 67.

Claim 83 has been amended to emphasize that an output signal from one side face of the thin front crystal is added to an output signal from the other side face of the crystal to further clarify how this configuration is distinguished from the content of DiFilippo, for the reasons discussed above.

It is submitted that claim 97 is allowable in its present form. Rivard (US 2003/0204126) is relied on as disclosing generation of signals during dead time or non-pulse-time. The paragraph of Rivard referred to concerns calibration of a Geiger counter. The only relevant aspect of this paragraph would appear to be reference to subtraction of a background count rate from all readings. However, claim 97 is specifically concerned with addressing the problem of unwanted signals generated in an X-ray detector by the process of pulsing a Linac. The subtracted signals do not merely represent general background, but are those generated during read-out cycles for pulses on which the Linac is pulsed but not triggered, that is during a pulse rather than between pulses.

Knowledge of the manner in which to remove noise due to general background radiation provided by Rivard would not alert the skilled person to the problems of noise and crystal persistence generated in an X-ray detector by the process of pulsing a Linac. Furthermore, it would not lead to the solution of triggering the Linac on each alternate pulse only and taking a measurement of signals generated during read-out cycles for pulses on which the Linac is not triggered, which can then be subtracted from signals generated when the Linac is triggered.

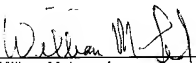
Claims 80, 86, 87, 92, 107 and 108 have been cancelled.

It is therefore submitted that the application, as amended, is in condition for allowance, and the Examiner's further and favorable reconsideration in that regard is urged.

As this Response is being sent during the fourth month following the Examiner's Office Action, an appropriate Petition for Extension of Time is also submitted herewith.

September 7, 2007

Respectfully submitted,

  
\_\_\_\_\_

William M. Lee, Jr.  
Registration No. 26,935  
Barnes & Thornburg  
P.O. Box 2786  
Chicago, Illinois 60690-2786  
(312) 214-4800  
(312) 759-5646 (fax)